

## AMENDMENTS TO THE SPECIFICATION

**Please amend page 5, lines 10-18 as follows:**

~~{0017} ——— Brief Description of the Drawings~~

~~{0018} ——— Fig. 1 is a diagram showing the result of analysis of a boron concentration change from the surface of a precursor fiber to the inside thereof by Auger electron spectroscopy in Example 1.~~

~~{0019} ——— Fig. 2 is an illustration which schematically shows steps of the generation of a silicon carbide fiber having a boron nitride layer in a fiber surface, provided by the present invention.~~

**Please amend page 5, line 20 to page 6, line 14 as follows:**

[0020] Detailed Description of the Invention

[0021] The present invention relates to a silicon carbide fiber which has, in a fiber surface, a boron nitride layer useful as a reinforcing fiber for a ceramic-based composite material and to a process for the production thereof. The silicon carbide fiber of the present invention has a central portion (silicon carbide phase) covering mechanical properties and a boron nitride phase covering interface function in a surface layer and near the surface layer, further has a slope constitution in which boron increases towards the surface layer and has a structure in which boron exists in the fiber surface and in the central portion in specific ratios respectively. Further,

it is presumed that the silicon carbide fiber of the present invention has a fiber structure in which the boron nitride layer has a layered structure which is parallel to the fiber surface. Accordingly, there can be obtained a fiber having an interface function excellent in oxidation resistance. In the present invention, unlike the above method of Sack et al., a surface layer having a high boron concentration is formed at a precursor step, as shown in Fig. 1, and it is reacted with a nitrogen-containing substance (e.g., nitrogen or ammonia) which is homogeneously diffused from the fiber surface. It is estimated that a boron nitride layered structure, which is parallel to the fiber surface, is formed as a result.

**Please amend page 12, lines 15-17 as follows:**

~~{0041} Fig. 2 schematically shows steps of the generation of the silicon carbide fiber having the intended slope constitution, provided by the present invention.~~